NATIONAL WAR COLLEGE NATIONAL DEFENSE UNIVERSITY

PARALYZED OR PULVERIZED? LIDDELL HART, CLAUSEWITZ, AND THE REPUBLICAN GUARD

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Course 5601, Seminar C Col Paula Thornhill Col Rake Schwartz 31 October 2003

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1. REPORT DATE 2004		2. REPORT TYPE		3. DATES COVE 00-00-2004	RED 1 to 00-00-2004	
4. TITLE AND SUBTITLE				5a. CONTRACT NUMBER		
Paralyzed or Pulverized? Liddell Hart, Clausewitz, and the Republica Guard				5b. GRANT NUMBER		
Guaru				5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)				5d. PROJECT NUMBER		
				5e. TASK NUMBER		
				5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) National War College,300 5th Avenue,Fort Lesley J. McNair,Washington,DC,20319-6000				8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)		
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAII Approved for publ	LABILITY STATEMENT ic release; distributi	on unlimited				
13. SUPPLEMENTARY NO The original docum	_{TES} nent contains color i	mages.				
14. ABSTRACT see report						
15. SUBJECT TERMS						
16. SECURITY CLASSIFIC		17. LIMITATION OF	18. NUMBER	19a. NAME OF		
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Form Approved OMB No. 0704-0188 On April 9, 2003, television viewers around the world witnessed the symbolic end of Saddam Hussein's regime. Millions saw footage of U.S. Marines helping a crowd of Iraqi citizens destroy a statue of the dictator in the center of Baghdad.¹ Coming just three weeks after the onset of Operation IRAQI FREEDOM (OIF), the scene seemed to vindicate General Tommy Franks's "fast and final" campaign plan—a rapid, two-pronged attack along the Tigris-Euphrates river crescent.

To those motivated to look more deeply, the statue's fall may also have validated tenets of classical military theory. With crowds dancing in the streets and Saddam in hiding, the regime appeared to have been paralyzed by the rapid approach and seizure of the capital. In his seminal work, *Strategy*, Sir Basil H. Liddell Hart had argued for precisely that kind of paralysis—a psychological paralysis created by the land component's maneuver. As the Army's V Corps and the First Marine Expeditionary Force (I MEF) fought through regular and paramilitary resistance, bypassed Iraqi strongholds and quickly pressed Baghdad, the regime could not respond. On the surface, then, the OIF campaign plan appeared to be a textbook application of Liddell Hart's indirect approach theory.

Appearances can be deceiving, however. In conjunction with the ground maneuver, the coalition's air component conducted its own multifaceted operations—operations that, according to air component commander Lt Gen T. Michael Moseley, ran the gamut from "strategic attack, to interdiction, to close air support, to resupply." Significantly, Moseley's air plan focused not on breaking the regime's will or merely supporting a ground advance. Instead, as Moseley said, it focused on destruction: "I find it interesting when folks say we're softening them up. We're not softening them up. We're killing them." Rather than paralyzing the enemy, Moseley

sought to engage him in decisive battle—as Prussian theorist Carl von Clausewitz had suggested nearly two hundred years before.

Moseley's words are important for theorists and campaign strategists, for they suggest a role reversal between air and ground power and highlight joint success. Furthermore, they suggest a rethinking of contemporary air power theory, much of which has focused on paralysis.
Through this apparent contradiction—an indirect (although aggressive) ground scheme of maneuver, coupled with a direct air attack—Clausewitz appears to more fully explain the joint OIF campaign than does Liddell Hart. To explore the issue, this essay will briefly compare and contrast the theorists' concepts and analyze OIF in their terms. Who better describes the character of war, and thereby points out lessons for future conduct? Which theorist suggests a way ahead for future warfighters?

The Theories and OIF

Liddell Hart and Clausewitz occupy opposite ends of the theoretical spectrum. Indeed,
Liddell Hart disdained Clausewitz and explicitly wrote to overturn what he called "the prime
canon of military doctrine . . . that 'the destruction of the enemy's main forces on the battlefield'
constituted the only true aim in war." Influenced by the horrific trench warfare along World
War I's Western Front, and with an eye toward a better postwar state of peace, Liddell Hart
sought to minimize death and destruction in warfare. Believing that one should "subdue the
opposing will at the lowest war-cost and minimum injury to the post-war prospect," Liddell Hart
argued "it is both more potent, as well as more economical, to disarm the enemy than to attempt
his destruction by hard fighting." Therefore, the "strategist should think in terms of paralyzing,
not killing," and should use the indirect approach "to upset the opponent's balance,
psychological and physical, thereby making possible his overthrow."

The Iraqi Freedom ground scheme of maneuver dovetailed nicely with Liddell Hart's indirect approach. The theorist had stated that "no general is justified in launching his troops to a direct attack upon an enemy firmly in position," and although soldiers and Marines clearly fought a number of vicious, difficult engagements, the land component plan sought to minimize direct contact. Lead elements of Third Infantry Division (3 ID)'s Seventh Cavalry Regiment jumped 100 miles into Iraq by March 21—the first full day of the ground war. 10 V Corps Commander Lt. Gen. William Wallace planned to bypass Iraqi cities and admitted surprise at the Iraqi's willingness "to attack out of those towns toward our formations, when my expectation was that they would be defending those towns and not be as aggressive." 11 As the I MEF advanced on their right—and after a brief pause following tremendous sandstorms—V Corps encircled, fought, and passed enemy concentrations at Nasiriyah and Najaf. By 2 April, U.S. forces drew within 50 kilometers of Baghdad, with the Army southwest near Karbala, and the I MEF southeast near Al Kut. Two days later, V Corps seized Baghdad International Airport, with follow-on forces "eliminating positions bypassed by 3 ID." Only five days after that, after destroying "remnants" of armored divisions between Kut and Baghdad, 3 ID and I MEF linked up in the capital and Saddam's statue fell. 13 Along the way, by moving quickly, exploiting an information campaign, and bypassing engagements where able, coalition forces achieved one of General Franks's operational objectives for a better peace, "which was to prevent the destruction of a big chunk of the Iraqi people's future wealth." ¹⁴ Liddell Hart would have approved of the CENTCOM commander's economical approach—it saved lives on both sides, and retained Iraqi oilfields for post-war reconstruction.

While Clausewitz also valued economy of force, he likely would have approached the operational problem differently. For him, economy of force had little to do with saving lives or

husbanding national resources. Emphasizing that "theory demands the shortest roads to the goal," Clausewitz argued that economy simply meant not wasting strength. He also took a different view of moral and psychological paralysis. For Liddell Hart, moral factors were predominant "in all military decisions. On them constantly turns the issue of war and battle." For Clausewitz, on the other hand, victory lay in "the sum of all strengths, physical as well as moral," and the two were interrelated. Loss in battle would affect the losing side psychologically, which would "in turn, [give] rise to additional loss of material strength, which is echoed in loss of morale; the two become mutually interactive as each enhances and intensifies the other." Psychological paralysis and physical destruction were inseparable, and Clausewitz highlighted the latter: "destruction of the enemy forces is the overriding principle of war, and, so far as positive action is concerned, the principal way to achieve our object." To underscore his argument in favor of decisive battle, the Prussian theorist flatly stated "we are not interested in generals who win victories without bloodshed."

Away from the embedded reporters and studio briefings, the air component put

Clausewitz's ideas into action. Rather than psychologically defeat regime leadership, airmen

waged a classic battle of attrition and took away the regime's ability to respond. According to

Maj Gen Daniel Leaf, the senior airman in the land component headquarters, they focused on the

Republican Guard, which started Gulf War II with as many as 900 T-72 and T-62 tanks at

between 80 and 90 percent effectiveness—more than twice as many tanks as coalition forces had

in the theater.²⁰ Six Republican Guard divisions defended Baghdad; five of the six attempted to

use the cover of sandstorms on 25 and 26 March to position themselves between the capital and
advancing coalition forces—but found themselves stymied by superior surveillance and targeting

from above. When ground forces did make contact with Republican Guard armor on March 30,

the Iraqis could not mount a coordinated defense, and in Lt Gen Wallace's words, "the U.S. Air Force had a heyday against those repositioning forces." From that point on, Moseley exhorted his command to "kill them faster"; 2 and 3 April saw more than 1300 sorties—roughly 80 percent of the daily totals—target the Republican Guard. Over the course of the air war, fully 15,592 targets, or 82 percent of the total, related to the ground battle. 23

While battle damage statistics remain classified, open source information and anecdotal evidence suggest that coalition air forces decimated the Guard. Maj Gen Leaf highlighted how ground forces found "a tremendous amount of destroyed equipment and a significant number of enemy casualties as they moved toward Baghdad," and on 3 April, Maj Gen Stanley McChrystal, the Joint Staff's vice director of operations, told a Pentagon news conference that the Republican Guard were "no longer credible forces." The following day, an Army intelligence officer briefed OIF commanders that the Medina Republican Guard Division had fallen to 18 percent of full strength while its sister division, the Hammurabi, was down to 44 percent, but noted "These numbers are somewhat in dispute. They may actually be lower." On 5 April—the day the Army made its "thunder run" into Baghdad—Moseley confidently reported "that our sensors show that the preponderance of the Republican Guard divisions that were outside of Baghdad are now dead."

Clearly, the air component—both alone, and in close coordination with its brothers on the ground—did more than psychologically imbalance Saddam's regime: it took away its major source of power. In Moseley's words, that allowed the "incredibly brave U.S. Army and U.S. Marine Corps troops . . . to capitalize on the effect that we've had on the Republican Guard and . . . to exploit that success." Therefore, any depiction of OIF's campaign plan in Liddell Hart's terms would be incomplete at best. Certainly the ground forces used maneuver to set conditions

for success; that maneuver, coupled with information operations and air power, undoubtedly upset the Iraqi troops' and regime's equilibrium. However, the "sword" did not drop "from a paralysed hand," as Liddell Hart forecast.²⁸ Coalition forces destroyed the sword in a Clausewitzian decisive battle.

Lessons Learned

Interestingly, the form of that decisive battle suggests a role reversal wherein ground forces maneuver for effect, and air and space forces bring the killing power to the fight. Until all the lessons learned reports and statistical compilations become available, the point will be moot—but air power had a phenomenal aggregate effect on ground forces in OIF. In the long run, the statistics matter less than the fact that jointness triumphed in this fight; as a number of commentators have argued, the concentration of air power against armor shows how the joint force commander's tools can be used interchangeably. "Combined arms works like gangbusters," exclaimed Richard A. Sinnreich, formerly of the Army's School of Advanced Military Studies, and retired Vice Admiral Arthur K. Cebrowski echoed the enthusiasm: "when the lessons learned come out . . . it is as if we will have discovered a new sweet spot in the relationship between land warfare and air warfare."

In addition to underscoring joint success, Operation IRAQI FREEDOM should redefine the air power debate in Clausewitzian terms. For much of the 1990s, theorists John Warden and Robert Pape argued about the proper use of air power. Warden claimed that airmen should focus on leadership and critical infrastructure, and never target fielded forces; Pape countered that air power was effective only when focused on those fielded forces.³⁰ The recent operations, seen through a Clausewitzian lens, suggest a middle ground: fielded forces can be strategic targets. Clausewitz defined a center of gravity as "the hub of all power and movement, on which

everything depends,"³¹ and the Republican Guard was precisely that: it undergirded all Saddam Hussein's operational and political power. Twelve years earlier, General Norman Schwarzkopf had called the Guard divisions "the heart and soul" of Hussein's army,³² and it was the Republican Guard that brutally suppressed the Shi'ite rebellion after Gulf War I. Indeed, analyst Rebecca Grant—among many others—argued that the Guard kept Saddam in power for nearly two decades, and that decimating Guard forces "signaled that Saddam's control over Iraq was about to collapse for good."³³ What better use could there be for any of the joint force commander's tools than to destroy an operational or strategic center of gravity? To be sure, fielded forces are not always centers of gravity—they were not in Kosovo, for example—but when a regime relies on an elite force to maintain power, air power should focus on that force's destruction.

Hussein's twenty-year reliance on the Republican Guard highlights a final lesson for the military theorist—a lesson that underscores the elegance and completeness of Clausewitz's descriptive power. As argued above, Liddell Hart emphasized paralysis, which he believed would ensure a better peace. Clausewitz, on the other hand, emphasized that war is merely a political tool, and that the aim of combat "is to destroy the enemy's forces as a means to a further end." He cautioned that "the ultimate outcome of a war is not always to be regarded as final. The defeated state often considers the outcome merely as a transitory evil, for which a remedy may still be found in political conditions at some later date." After Gulf War I, Hussein proved Clausewitz right. Saddam was paralyzed by General Chuck Horner's air war and Schwarzkopf's "left hook" ground campaign. The Republican Guard survived, however, and Hussein kept the United States tied down in Iraq for the next twelve years. Paralysis proved to be merely the means to an intermediate end—Hussein's ejection from Kuwait—not Liddell Hart's perfection

of strategy. In hindsight, the United States would have likely created a better political endstate by engaging in decisive battle in 1991. Even without going to Baghdad—which was politically untenable at the time—coalition forces could have produced a more acceptable regional balance of power by destroying the Republican Guard.

Implications for the Future

Although he wrote nearly 200 years ago, and with no concept of air power, Clausewitz's theory more completely explains recent history than does Liddell Hart's. Furthermore, Clausewitz highlighted a number of pitfalls and problem areas that could still influence military operations. General Wallace's comment that "the enemy is a bit different from the one we wargamed against" calls to mind one Clausewitzian principle that the strategist will ignore at his peril: uncertainty. The Prussian master argued that "in war, everything is uncertain," lamented the "general unreliability of all information," and warned that the "difficulty of accurate recognition constitutes one of the most serious sources of friction in war." 36

Much contemporary military thought tends to discount uncertainty and friction, however; one prominent historian argued to a National War College audience that the entire spectrum of effects-based operations ignores the very possibility of uncertain information.³⁷ To be sure, many theorists side with John Warden, who has written that technology will overcome and eliminate uncertainty, friction, and fog—and the current development of Joint Operations Centers and Air Operations Centers seeks to capitalize on that technology. In OIF, intelligence, surveillance, and reconnaissance aircraft flew 1,000 sorties and transmitted 42,000 battlefield images, 3,200 hours of "full-motion video," and 1,700 hours of moving target images back to Lt Gen Moseley's Combined Air Operations Center. In fairness, that technology undoubtedly contributed to the defeat of the Republican Guard. In one famous instance, the Marine

Operations Center detected a large column of vehicles and artillery trying to escape from Baghdad by night. Using live video, the watch officer vectored aircraft to the column and observed as they destroyed at least 80 vehicles.³⁸

As well as success, however, that technology brings danger. As Williamson Murray has pointed out, technologies that remove the fog of war "are unlikely because they defy modern science and what science suggests about the world." Uncertainty will rear its head, and both operators in the field and command and control warriors at the various operations centers must prepare themselves for the inevitable moments that communications nodes and data links will drop off the air. Likewise, operations center personnel must guard against a tendency to micromanage; those on the front line will usually have a better ability to make tactical decisions. Lt Gen Michael Short, the air component commander for Operation ALLIED FORCE over Kosovo, has told a number of audiences that his own real-time micromanagement of tactics may have led to, and at least contributed to, an F-117's shootdown in that conflict. No matter how good data transmission technology becomes, operations center personnel must force themselves to push execution decisions down to the lowest possible level.

As luck—or genius—would have it, Clausewitz also suggested a solution. He believed in education, primarily to develop the mind of future commanders, but also because "knowledge must be transformed into genuine capability." ⁴⁰ If the U.S. military is to both decentralize and take maximum advantage of developing technology, that "knowledge transformation" must take place through world-class training. Such training is on the horizon; distributed mission operations will link mission simulators and operations centers around the world to facilitate large-scale operational- and tactical-level joint training. To be most effective, however, that training must incorporate uncertainty and friction. High-fidelity command and control can

actually provide negative learning: as Maj Dave Meyer, an Air National Guard F-16 pilot reported, "communications are 100 percent in the simulator," but in combat over Iraq, the controller "only hears you 50 percent of the time." Quite simply, distributed mission operations need to include mission-type orders and periods of limited communication. The front-line fighter cannot allow his datalink to become a crutch, lest he lose that crutch the first time in actual combat.

Conclusion

To those who watched Operation IRAQI FREEDOM from afar, via CNN footage, embedded reporters' updates, and CENTCOM news briefings, the joint campaign appeared to embody a classic indirect approach. Despite difficult fighting around cities like Nasiriyah, ground forces shot through the country rapidly, leapfrogging enemy strongholds—precisely as Basil H. Liddell Hart had recommended. When they made contact with regular forces, coalition troops quickly defeated the Iraqis, and continued on to Baghdad. The rapid fall of the capital, just days after the Iraqi information minister assured viewers that there were no foreign troops anywhere near the city, suggested that Saddam Hussein's regime lay paralyzed by the rapid maneuver.

A closer look reveals a different story. The regime was not paralyzed, it lacked the capability to act. As three *Washington Post* reporters noted, the war "reached a swift conclusion in Baghdad in part because of the debilitating impact of air power against Iraq's Republican Guard divisions." In conjunction with ground power, the air component crushed Saddam's major source of power in decisive battle—and validated once again the enduring insights of Carl von Clausewitz's *On War*. Seen through a Clausewitzian lens, OIF air operations highlight joint success, and recast the air power debate: fielded forces can be centers of gravity and strategic

targets, and paralysis is a means—not "the perfection of strategy." Finally, Clausewitz's focus on uncertainty cautions against overreliance on command and control technology, but at the same time, Clausewitz suggests a way to counteract uncertainty, fog and friction. The U.S. military possesses the most incredible assets in the world: its fighting men and women. Educate them, train them, trust them, then use them.

BIBLIOGRAPHY

- Andrews, William F. "Airpower Against an Army: Challenge and Response in CENTAF's Duel with the Republican Guard." Maxwell AFB, AL: Air University Press, 1998.
- Atkinson, Rick, Peter Baker, and Thomas E. Ricks. "Confused Start, Decisive End: Invasion Shaped by Miscues, Bold Risks, and Unexpected Successes." *The Washington Post*, 13 April 2003, A1.
- Belote, Howard D. "Paralyze or Pulverize? Liddell Hart, Clausewitz, and their Influence on Air Power Theory," *Strategic Review*, Winter 1999, 40-46.
- von Clausewitz, Carl. *On War*, ed. and trans. Michael Howard and Peter Paret. Princeton, NJ: Princeton University Press, 1984.
- Erwin, Sandra I. "Services Cope With Demand For Joint Training," *National Defense Magazine*, November 2003. Available at http://www.nationaldefensemagazine.org/toc.cfm?IssueID=0311.
- Fadok, David S. "John Boyd and John Warden: Air Power's Quest for Strategic Paralysis." Maxwell AFB, AL: Air University Press, 1995.
- Graham, Bradley, and Vernon Loeb. "An Air War of Might, Coordination and Risks." *The Washington Post*, Sunday, April 27, 2003, A01.
- Grant, Rebecca. "Gulf War II: Air and Space Power Led the Way," an Air Force Association Special Report. Arlington, VA: Aerospace Education Foundation, 2003.
- _____, "Hand In Glove," Air Force Magazine, July 2003, 30-35.
- _____, "Saddam's Elite in the Meat Grinder," *Air Force Magazine*, September 2003, 40-44.
- Iraqi Theater Of Operations, Ground Forces Map (Update VI, 04/02/2003), available at http://www.periscope.ucg.com/special/images/iraqmap4-02.jpg
- Kaplan, Fred. "Bombing by Numbers." Slate.com, May 27, 2003.
- Liddell Hart, Basil H. Strategy, 2d rev. ed. New York: Meridian, 1991.
- Murray, Williamson. "The Evolution of Joint Warfare." *Joint Forces Quarterly*, Summer 2002, 30-37.
- Operation Iraqi Freedom, http://www.globalsecurity.org/military/ops/iraqi_freedom.htm.
- Operation Iraqi Freedom (Parts I XVI, 03/20/2003 through 04/15/2003), Periscope Special Reports, available at http://www.periscope.ucg.com/special.shtml.
- Tyler, Patrick E. "U.S. Forces Take Control of Baghdad," New York Times, 10 April 2003, A1.
- U.S. Central Command Air Forces. *Operation Iraqi Freedom--By the Numbers*. Shaw Air Force Base, SC, 30 April 2003.

¹ Patrick E. Tyler, "U.S. Forces Take Control of Baghdad," New York Times, 10 April 2003.

² T. Michael Moseley, DOD News Briefing, 5 April 2003, quoted in Rebecca Grant, "Gulf War II: Air and Space Power Led the Way," (Arlington VA: Aerospace Education Foundation, 2003), 28.

³ Grant, "Saddam's Elite in the Meat Grinder," Air Force Magazine, September 2003, 44.

⁴ See David S. Fadok, "John Boyd and John Warden: Air Power's Quest for Strategic Paralysis" (Maxwell AFB, AL: Air University Press, 1995), 47.

⁵ Basil H. Liddell Hart, *Strategy*, 2d rev. ed. (New York: Meridian, 1991), 339. See also Howard D. Belote,

[&]quot;Paralyze or Pulverize? Liddell Hart, Clausewitz, and their Influence on Air Power Theory," *Strategic Review*, Winter 1999, 41.

⁶ Liddell Hart, 212.

- ⁷ Liddell Hart, 212.
- ⁸ Liddell Hart, 213. Argument adapted from Belote, 41-2.
- ⁹ Liddell Hart, 147.
- ¹⁰ Grant, "Gulf War II," 17.
- ¹¹ Lt. Gen. William Wallace, V Corps Commander, DOD News Briefing, 7 May 2003. Quoted in Grant, "Gulf War
- 12" "Operation Iraqi Freedom Day 16," www.globalsecurity.org/military/ops/iraqi freedom d16.htm.
- ¹³ "Operation Iraqi Freedom Day 21," www.globalsecurity.org/military/ops/iraqi freedom d21.htm.
- ¹⁴ Franks, CENTCOM news briefing, 30 March 2003, quoted in Grant, "Gulf War II," 8.
- ¹⁵ Carl von Clausewitz, On War, ed. and trans, Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), 624.
- ¹⁶ Liddell Hart, 4.
- ¹⁷ Clausewitz, 253.
- ¹⁸ Clausewitz, 258.
- ¹⁹ Clausewitz, 260.
- ²⁰ Grant, "Gulf War II," 19.
- ²¹ Grant, "Hand In Glove," Air Force Magazine, July 2003, 34.
- ²² Bradley Graham and Vernon Loeb, "An Air War of Might, Coordination and Risks." *The Washington Post*, Sunday, April 27, 2003, A01, and Global Security Org's "Operation Iraqi Freedom," Days 14 and 15, available at http://www.globalsecurity.org/military/ops/iraqi freedom d14.htm and d15.htm.
- ²³U.S. Central Command Air Forces, Operation Iraqi Freedom—By the Numbers (Shaw Air Force Base, SC: 30 April 2003), 5. ²⁴ Grant, "Gulf War II," 30 and 33.
- ²⁵ Graham and Loeb.
- ²⁶ Grant, "Saddam's Elite," 40.
- ²⁷ Grant, "Hand in Glove," 34.
- ²⁸ Liddell Hart, 212.
- ²⁹ Grant, "Hand in Glove," 30-31.
- ³⁰ See Robert A. Pape, *Bombing to Win: Air Power and Coercion in War* (Ithaca, NY: Cornell University Press, 1996); John A. Warden III. "Success in Modern War: A Reply to Robert Pape's Bombing to Win," Security Studies vol. 7, no. 2 (Winter 1997/98), 172-190; Robert A. Pape, "The Air Force Strikes Back: A Reply to Barry Watts and John Warden," Security Studies vol. 7, no. 2 (Winter 1997/98), 191-214; and Karl Mueller, "Strategies of Coercion: Denial, Punishment, and the Future of Air Power," Security Studies vol. 7, no. 3 (Spring 1998), 182-228. ³¹ Clausewitz, 595-6.
- ³² Quoted in William F. Andrews, "Airpower Against an Army: Challenge and Response in CENTAF's Duel with the Republican Guard," Maxwell AFB, AL: Air University Press, 1998, 21.
- ³³ Grant, "Saddam's Elite," 40.
- ³⁴ Clausewitz, 97.
- ³⁵ Clausewitz, 80.
- ³⁶ Clausewitz, 136, 140, 117. Emphasis in original.
- ³⁷ Guest lecturers at National Defense University speak under a policy of nonattribution.
- ³⁸ Rick Atkinson, Peter Baker, and Thomas E. Ricks, "Confused Start, Decisive End: Invasion Shaped by Miscues, Bold Risks, and Unexpected Successes," The Washington Post, 13 April 2003, A1.
- ³⁹ Williamson Murray, "The Evolution of Joint Warfare," *Joint Forces Quarterly*, Summer 2002, 36.
- ⁴⁰ Clausewitz, 147.
- ⁴¹ Sandra I. Erwin, "Services Cope With Demand For Joint Training," *National Defense Magazine*, November 2003. Available at http://www.nationaldefensemagazine.org/toc.cfm?IssueID=0311.
- ⁴² Atkinson, Baker, and Ricks.